

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT


(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 02 075WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DK 03/00515	International filing date (day/month/year) 29.07.2003	Priority date (day/month/year) 05.08.2002
International Patent Classification (IPC) or both national classification and IPC A23G9/28		
Applicant TETRA LAVAL HOLDING & FINANCE S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 01.03.2004	Date of completion of this report 14.05.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Groh, B Telephone No. +49 89 2399-7855



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EXAMINATION REPORT**

International application No. PCT/DK 03/00515

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-7 as originally filed

Claims, Numbers

1-11 as originally filed

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reference is made to the following documents:

D1: DK 174590 B1

D2: US 3822623

1. Novelty

None of the prior art documents discloses a device or method for cutting an extruded ice mass, characterized by the use of knives, which operate in the manner described in the independent claims 1 and 7.

The subject-matter of claims 1 and 7, and the dependent claims is therefore new (Article 33(2) PCT).

2. Inventive step

The document D1 is regarded as being the closest prior art to the subject-matter of cutting pieces off extruded ice masses, especially ice masses with inclusions.

The subject-matter of present claims 1 and 7 differ from D1 (see Fig. 1) in that the cutting knives do not operate in the same plane. Furthermore, it is specified in the present claims, that the stroke length of the knives are different from each other (e.g. one cutting all the way through the ice mass, the other only half the way), whereas in D1 the stroke lengths are symmetric.

The problem to be solved by the present invention may be regarded as providing an alternative method and device for cutting extruded ice masses, especially such which are suitable for cutting ice cream masses with solid inclusions.

The solution to this problem is given in the present claims by providing a method and a device where the parallel operation-planes of the cutting devices (knives) are slightly offset, so that they can overlap. Furthermore, the stroke lengths of the two knives are different.

Although the skilled person might have improved the ice mass cutting device known from D1 by using the already known cutting mechanism of an ordinary pair

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of scissors (that is making the cutting planes to overlap each other during the cutting process) the skilled person would not have had indications or guidance to provide the two cutting knives (or similar plane cutting objects) with different strike lengths.

In case the claimed priority is examined and can be confirmed, D1 would no longer be considered to be part of the prior art. Then D2 would be considered to represent a relevant piece of the prior art in cutting extruded ice masses: However, D2 is not suitable for cutting large solid inclusions in extruded ice masses, because cutting-wires are used instead of knives. Furthermore there are no indications in the prior art which would lead the skilled person from D2 to the present invention.

Therefor an inventive activity (Art. 33(3) PCT) is recognized.

3. The industrial applicability is given by the use for cutting, for example, extruded ice cream products with solid inclusions. Art. 33(4) is fulfilled.

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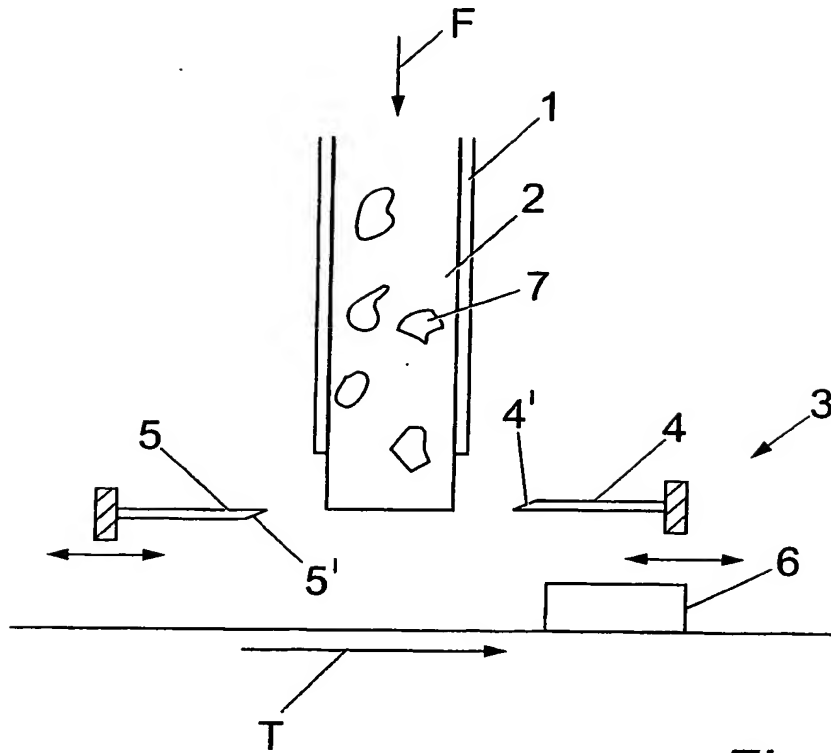


Fig. 1

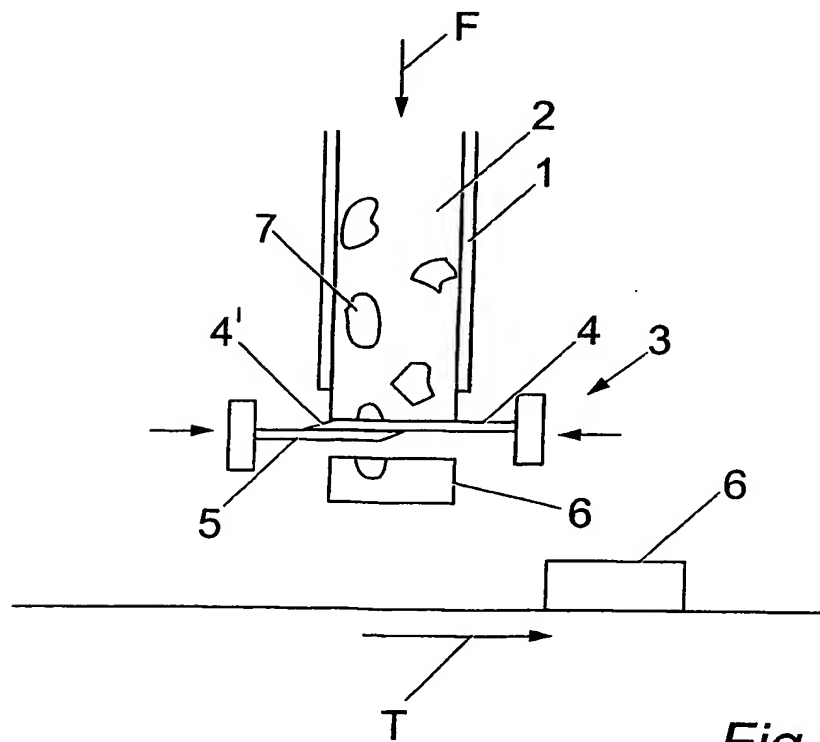
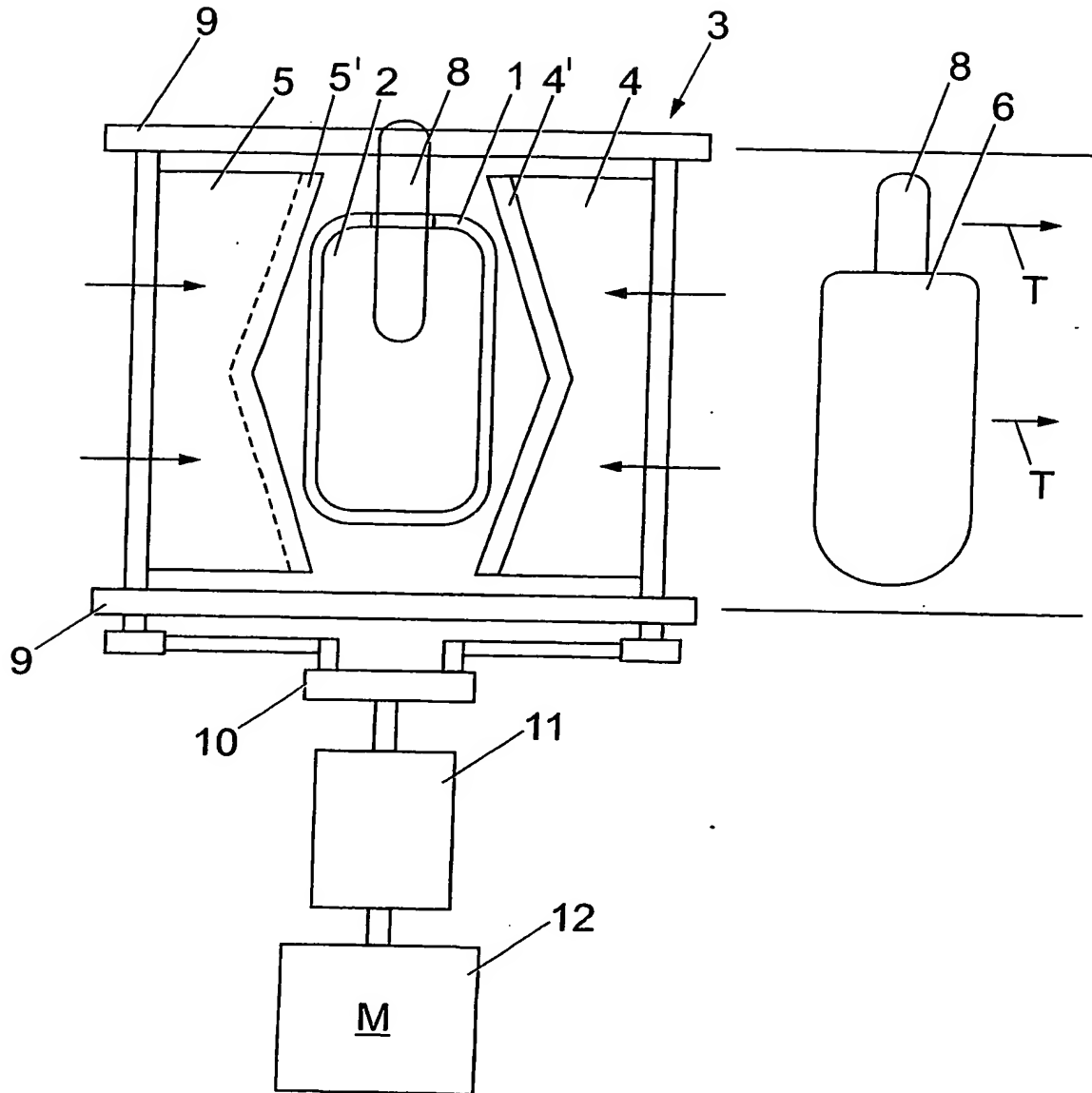
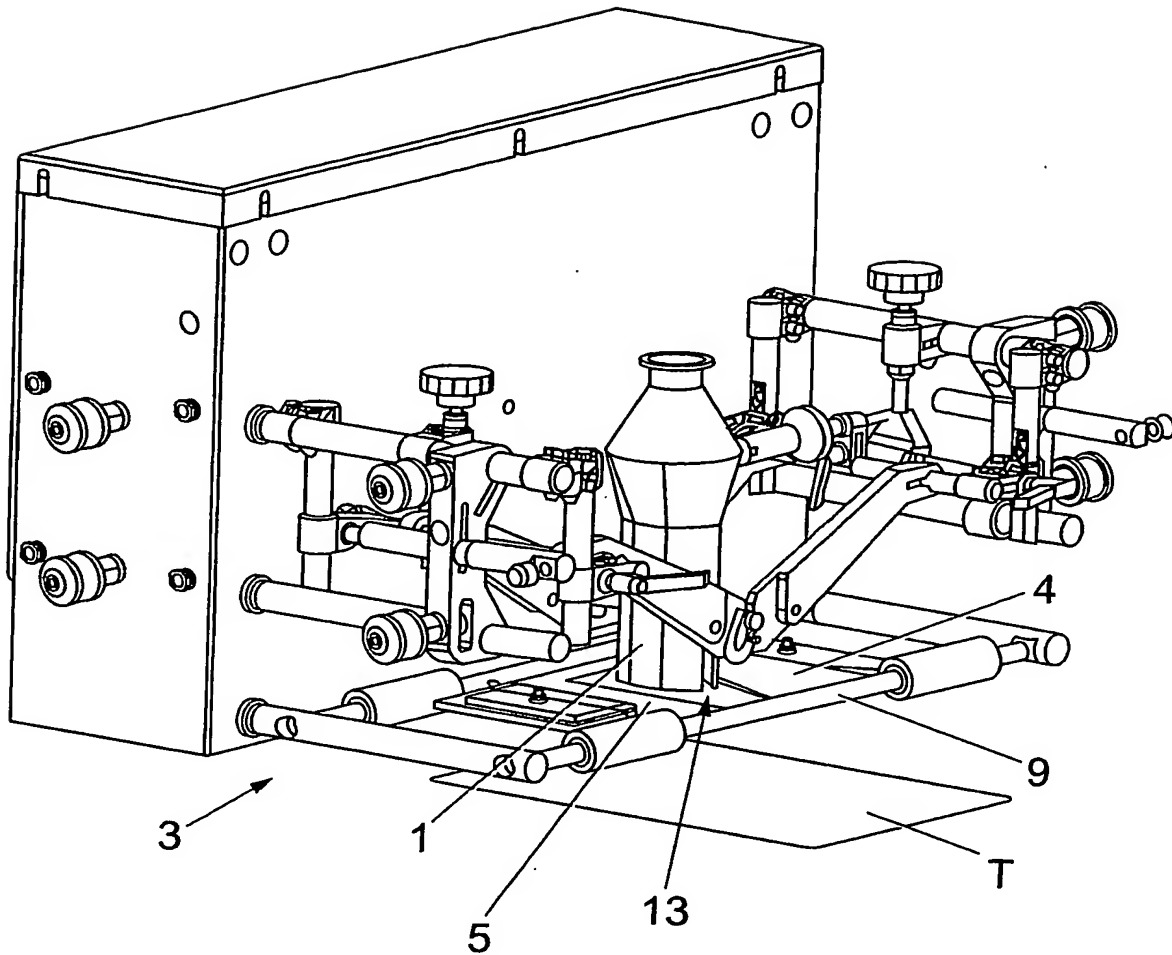


Fig. 2

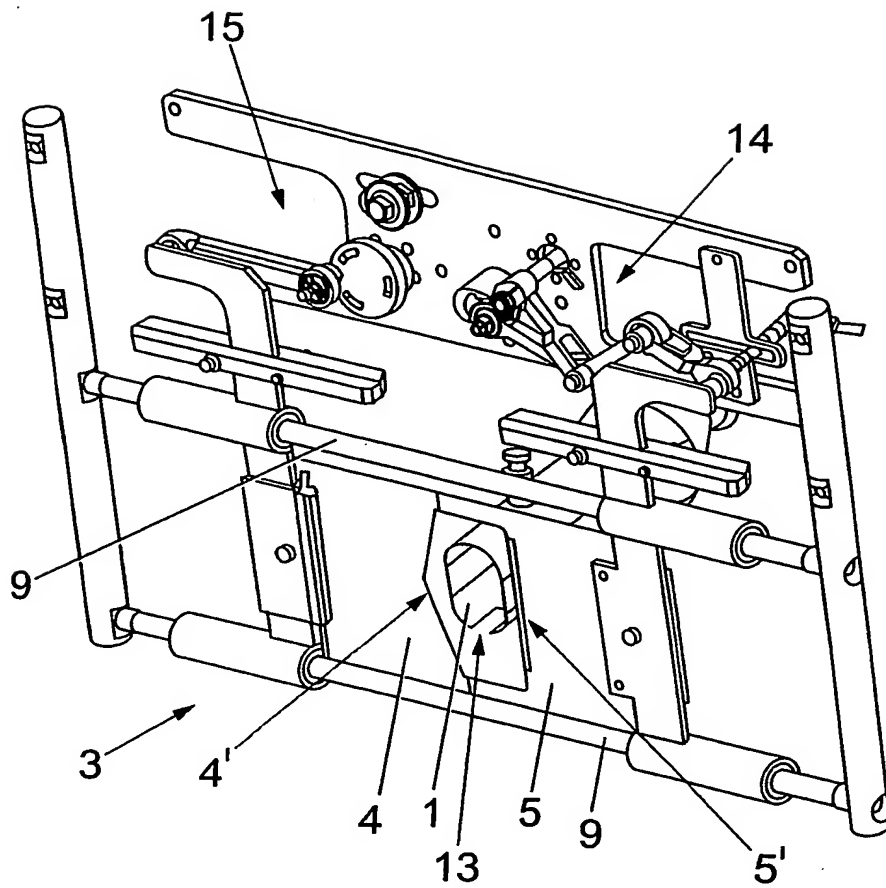
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*Fig. 4*

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*Fig. 5*

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